2006-08 ENGINE PERFORMANCE

Fuel Supply System (R18A1) - Civic (Except Hybrid)

COMPONENT LOCATION INDEX

NOTE: Refer to the FUEL SUPPLY SYSTEM (GX) (SUPPLEMENT) article for additional information for the GX model.

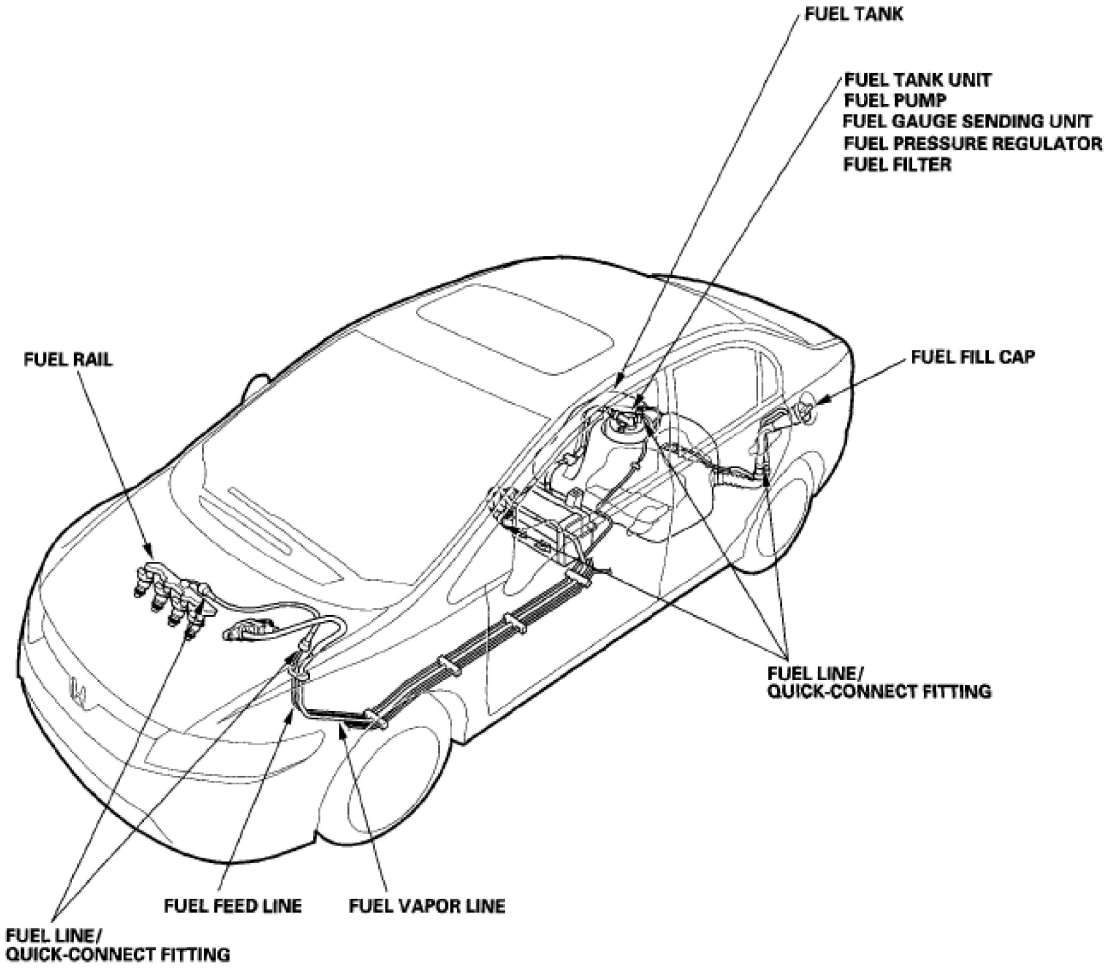
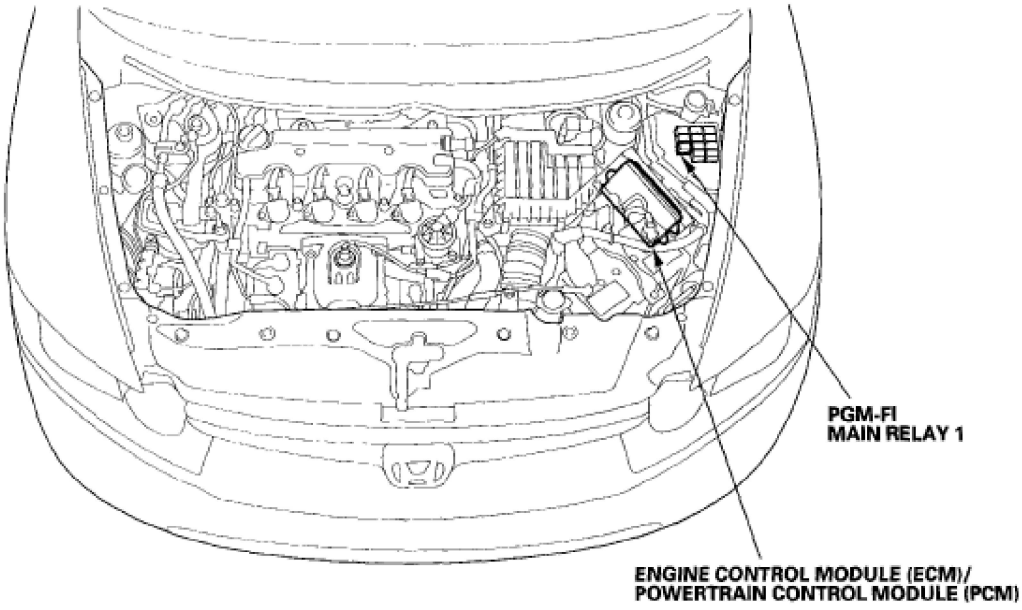


Fig. 1: Identifying Fuel Supply System Component Location (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.



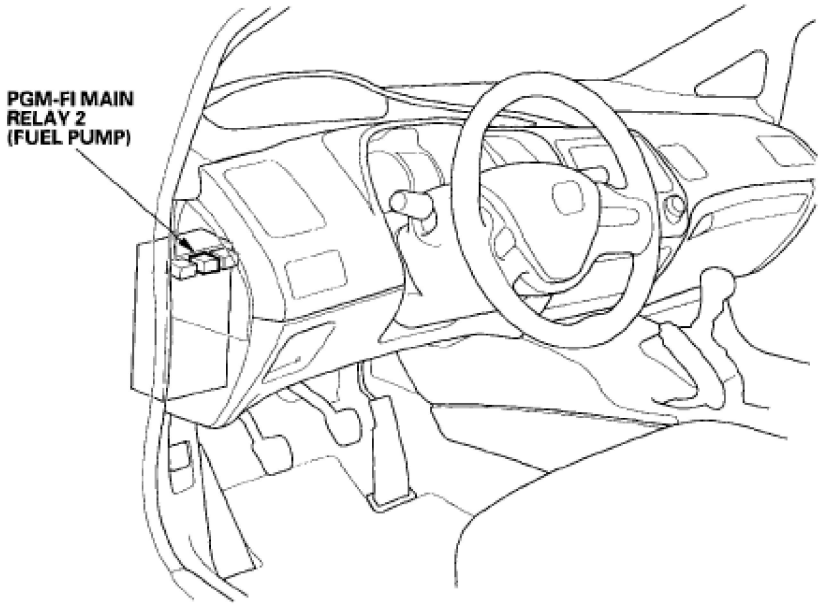


Fig. 2: Identifying Fuel Supply System Component Location (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

DTC P0461: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT RANGE/PERFORMANCE PROBLEM

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**
- **Because it requires 162 miles (260 km) of driving without refueling to complete this diagnosis, DTC P0461 cannot be duplicated during this troubleshooting.**

1. Test the fuel gauge sending unit (see **FUEL GAUGE SENDING UNIT TEST**).

   Is the fuel gauge sending unit OK?

   YES - Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge assembly.

   NO - Replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT**), then go to step 2.

2. Turn the ignition switch ON (II).
3. Reset the ECM/PCM with the HDS.
4. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE**).
5. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0461 indicated?

   YES - Check for poor connections or loose terminals at the fuel gauge sending unit and the gauge control module, then go to step 1.

   NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

DTC P0462: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT LOW VOLTAGE

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS, and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

   Is DTC P0462 indicated?

   YES - Go to step 4.

   NO - Intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit.

4. Turn the ignition switch OFF.
5. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION**).
6. Remove the rear floor upper cross-member and the access panel from the floor (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
7. Disconnect the fuel tank unit 4P connector.
8. Turn the ignition switch ON (II).
9. Clear the DTC with the HDS, and wait 5 seconds.
10. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

    YES - Replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT**), then go to step 22.

    NO - Go to step 11.

11. Turn the ignition switch OFF.

12. Remove the gauge control module (tach) (see **TACHOMETER**).
13. Disconnect the gauge control module (tach) 36P connector.
14. Check for continuity between fuel tank unit 4P connector terminal No. 1 and body ground.

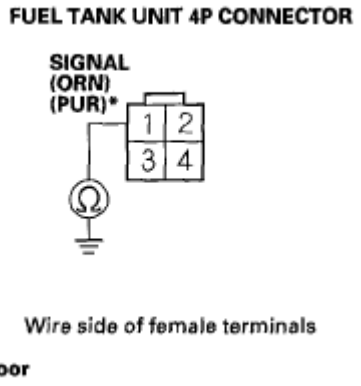


Fig. 3: Checking Continuity Between Fuel Tank Unit 4P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the gauge control module (tach) (signal line) and the fuel gauge sending unit, then go to step 23.

NO - Go to step 15.

15. Reconnect the gauge control module (tach) 36P connector.
16. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
17. Connect the fuel tank unit 4P connector.
18. Turn the ignition switch ON (II).
19. Clear the DTC with the HDS.
20. Set the float (A) to the E position.

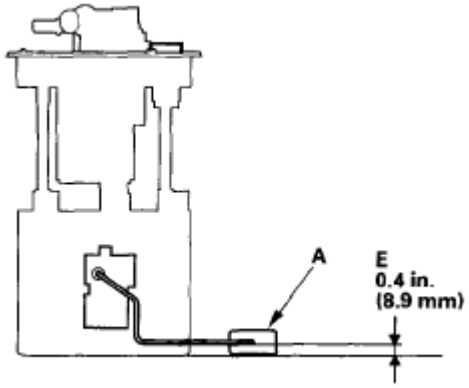


Fig. 4: Setting Float To E Position (With Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Check the fuel gauge.

    Does the gauge move to the empty position?

    YES - Go to step 29.

    NO - Replace the gauge control module (tach) (see **TACHOMETER**), then go to step 22.

22. Turn the ignition switch OFF.
23. Reconnect all connectors.
24. Install the parts in the reverse order of removal.
25. Turn the ignition switch ON (II).
26. Reset the ECM/PCM with the HDS.
27. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE**).
28. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0462 indicated?

    YES - Check for poor connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit, then go to step 1.

    NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are

indicated, go to the indicated DTC's troubleshooting.

29. Update the ECM/PCM if it does not have the latest software (see **UPDATING ECM/PCM**), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**).
30. Reconnect all connectors.
31. Install the parts in the reverse order of removal.
32. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0462 indicated?

    YES - Check for poor connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO - If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

DTC P0463: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT HIGH VOLTAGE

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS, and wait 5 seconds.
3. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

    YES - Go to step 4.

    IMO-Intermittent failure, the system is OK at this time. Check for poor

connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit.

4. Turn the ignition switch OFF.
5. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION**).
6. Remove the rear floor upper cross-member and the access panel from the floor (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
7. Disconnect the fuel tank unit 4P connector.
8. Connect fuel tank unit 4P connector terminal No. 3 to body ground with a jumper wire.

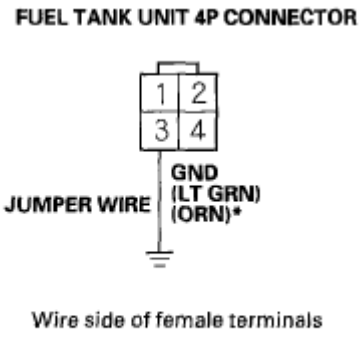


Fig. 5: Connecting Fuel Tank Unit 4P Connector Terminal No. 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the gauge control module (tach) (see **TACHOMETER**).
10. Disconnect the gauge control module (tach) 36P connector.
11. Check for continuity between gauge control module (tach) 36P connector terminal No. 33 and body ground.

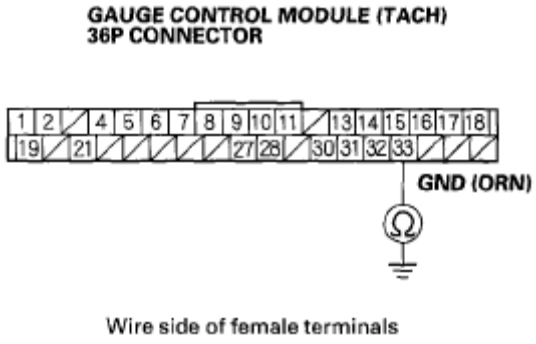

GAUGE CONTROL MODULE (TACH)
36P CONNECTOR
1 2 4 5 6 7 8 9 10 11 13 14 15 16 17 18
19 21 27 28 30 31 32 33
GND (ORN)
Wire side of female terminals

Fig. 6: Checking Continuity Between Gauge Control Module (TACH) Terminal No. 33 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 12.

NO - Repair open in the wire between the gauge control module (tach) (GND line) and the fuel gauge sending unit, then go to step 24.

12. Connect fuel tank unit 4P connector terminal No. 1 to body ground with a jumper wire.

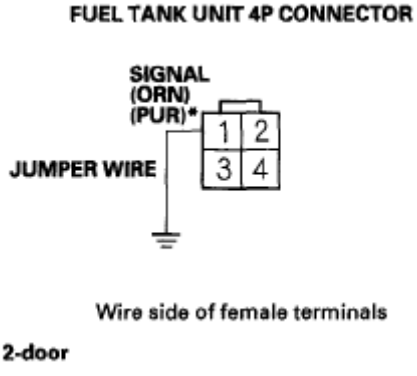


Fig. 7: Connecting Fuel Tank Unit 4P Connector Terminal No. 1 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check for continuity between gauge control module (tach) 36P connector terminal No. 32 and body ground.

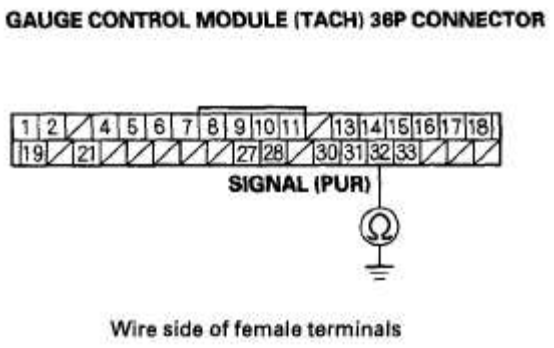

GAUGE CONTROL MODULE (TACH) 36P CONNECTOR
1 2 4 5 6 7 8 9 10 11 13 14 15 16 17 18
19 21 27 28 30 31 32 33
SIGNAL (PUR)
Wire side of female terminals

Fig. 8: Checking Continuity Between Gauge Control Module (TACH) Terminal No. 32 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 14.

NO - Repair open in the wire between the gauge control module (tach) (signal line) and the fuel gauge sending unit, then go to step 24.

14. Remove the jumper wire from the fuel tank unit 4P connector.
15. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
16. Test the fuel gauge sending unit (see **FUEL GAUGE SENDING UNIT TEST**).

    Is the fuel gauge sending unit OK?

    YES - Go to step 17.

    NO - Replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT**), then go to step 23.

17. Connect the fuel tank unit 4P connector.
18. Reconnect the gauge control module (tach) 36P connector.
19. Turn the ignition switch ON (II).
20. Clear the DTC with the HDS.

21. Set the float (A) to the F position.

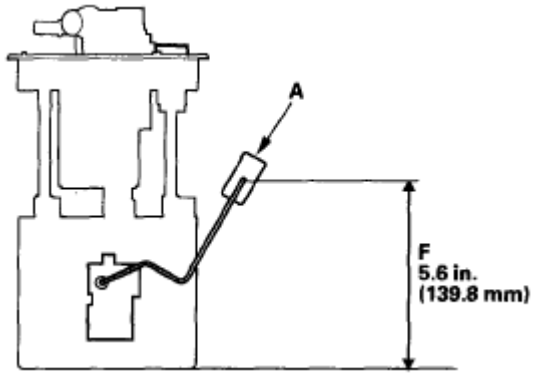


Fig. 9: Setting Float To F Position (With Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Check the fuel gauge.

    Does the gauge move to the full position?

    YES - Go to step 32.

    NO - Replace the gauge control module (tach) (see **TACHOMETER**), then go to step 23.

23. Turn the ignition switch OFF.
24. Reconnect all connectors.
25. Install the parts in the reverse order of removal.
26. Turn the ignition switch ON (II).
27. Reset the ECM/PCM with the HDS.
28. Do the ECM/PCM idle learn procedure (see **ECM/PCM IDLE LEARN PROCEDURE**).
29. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

    YES - Check for poor connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit, then go to step 1.

NO - Troubleshooting is complete. If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

30. Reconnect all connectors.
31. Install the parts in the reverse order of removal.
32. Update the ECM/PCM if it does not have the latest software (see **UPDATING ECM/PCM**), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**).
33. Check for Temporary DTCs or DTCs with the HDS.

    Is DTC P0463 indicated?

    YES - Check for poor connections or loose terminals at the gauge control module (tach) and the fuel gauge sending unit. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**), then recheck. If the ECM/PCM was substituted, go to step 1.

    NO - If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**). If any other Temporary DTCs or DTCs are indicated, go to the indicated DTC's troubleshooting.

FUEL PUMP CIRCUIT TROUBLESHOOTING

If you suspect a problem with the fuel pump, check that the fuel pump actually runs; when it is on, you will hear some noise if you listen to the fuel fill port with the fuel fill cap removed. The fuel pump should run for 2 seconds when the ignition switch is first turned on. If the fuel pump does not make noise, check as follows:

1. Turn the ignition switch OFF.
2. Remove the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**), then remove PGM-FI main relay 2 (FUEL PUMP) (A) from the under-dash fuse/relay box.

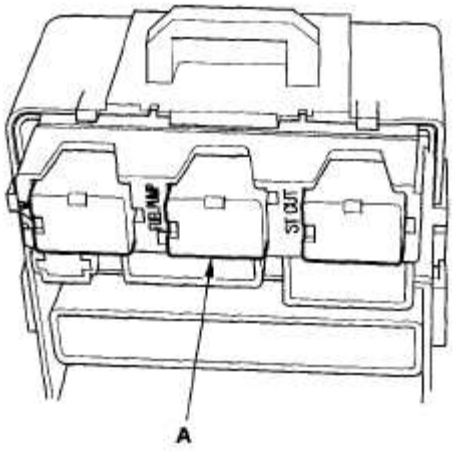


Fig. 10: Removing PGM-FI Main Relay (Fuel Pump)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Reinstall the under-dash fuse/relay box.
4. Turn the ignition switch ON (II).
5. Measure voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 4 and body ground.

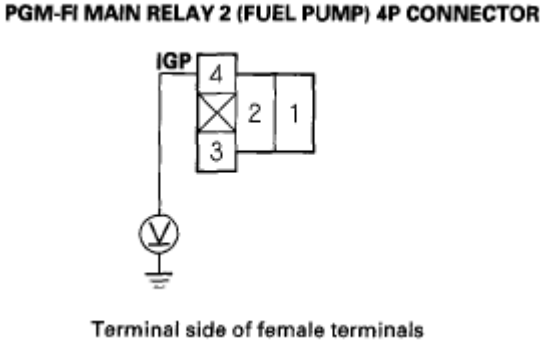


Fig. 11: Measuring Voltage Between PGM-FI Main Relay 2 (FUEL PUMP) 4P Connector Terminal No. 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 12.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Disconnect the under-hood fuse/relay box connector E (10P).
8. Disconnect C101 connector at left side of engine compartment; A/T model (see **CONNECTOR TO HARNESS INDEX**), M/T model (see **CONNECTOR TO HARNESS INDEX**).
9. Disconnect the under-dash fuse/relay box connector G (21P).
10. Connect under-dash fuse/relay box connector G (21P) terminal No. 4 to body ground with a jumper wire.

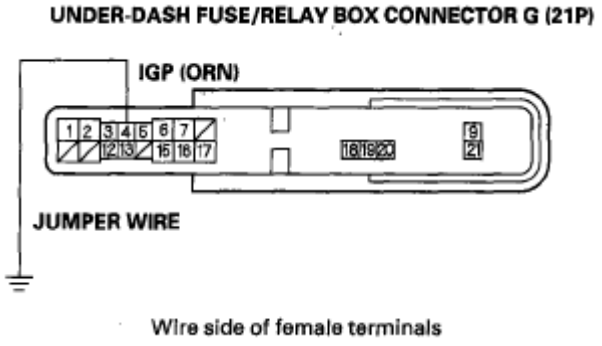


Fig. 12: Connecting Fuse/Relay Box Connector G (21P) Terminal No. 4 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check for continuity between under-hood fuse/relay box connector E (10P) terminal No. 5 and body ground.

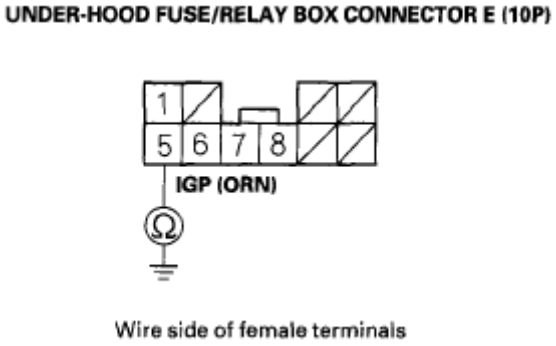


Fig. 13: Checking Continuity Between Fuse/Relay Box Connector E (10P) Terminal No. 5 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -

- Replace PGM-FI main relay 1.
- If needed, replace the under-hood fuse/relay box (see **REMOVAL AND INSTALLATION**).

NO - Repair open in the wire between the under-hood fuse/relay box and the under-dash fuse/relay box.

12. Measure voltage between PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 1 and body ground.

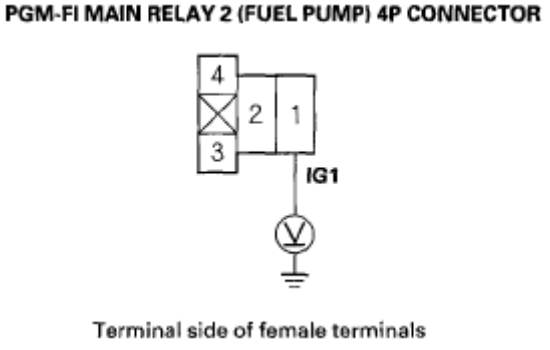


Fig. 14: Measuring Voltage Between PGM-FI Main Relay 2 (FUEL PUMP) 4P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 13.

NO -

- Check the No. 2 FUEL PUMP (15 A) fuse in the under-dash fuse/relay box.
- If needed, replace the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**).

13. Turn the ignition switch OFF.

14. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminal No. 3 to body ground with a jumper wire.

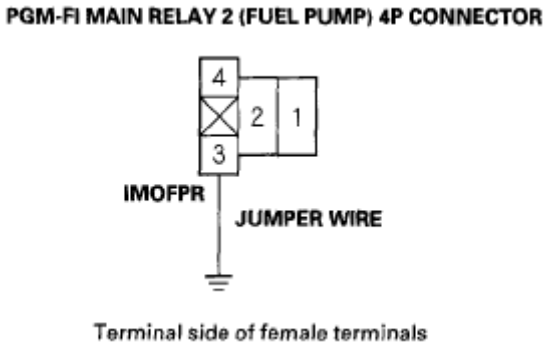


Fig. 15: Connecting PGM-FI Main Relay 2 (FUEL PUMP) 4P Connector Terminal No. 3 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Jump the SCS line with the HDS.
16. Disconnect ECM/PCM connector A (44P).
17. Check for continuity between body ground and ECM/PCM connector terminal A15.

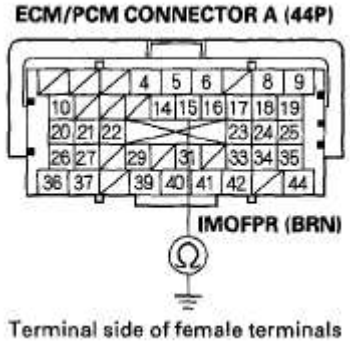


Fig. 16: Checking Continuity Between Body Ground And ECM/PCM Connector Terminal A15
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 18.

NO - Repair open in the wire between PGM-FI main relay 2 (FUEL PUMP) and the ECM/PCM (A15).

18. Remove the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**), then reinstall PGM-FI main relay 2 (FUEL PUMP).
19. Reinstall the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**).
20. Connect ECM/PCM connector terminal A6 to body ground with a jumper wire.

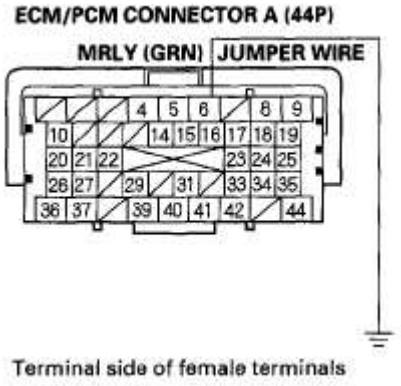

ECM/PCM CONNECTOR A (44P)
MRLY (GRN)
JUMPER WIRE
4 5 6 8 9
10 14 15 16 17 18 19
20 21 22 23 24 25
26 27 29 31 33 34 35
36 37 39 40 41 42 44
Terminal side of female terminals

Fig. 17: Connecting ECM/PCM Connector Terminal A6 To Body Ground With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Turn the ignition switch ON (II).
22. Measure voltage between ECM/PCM connector terminal A15 and body ground.

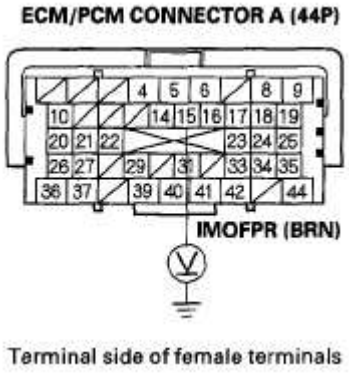


Fig. 18: Measuring Voltage Between ECM/PCM Connector Terminal A15

And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 23.

NO - Replace PGM-FI main relay 2 (FUEL PUMP).

23. Turn the ignition switch OFF.
24. Reconnect ECM/PCM connector A (44P).
25. Open the SCS line with the HDS.
26. Turn the ignition switch OFF.
27. Turn the ignition switch ON (II), and measure voltage between under-dash fuse/relay box connector F (34P) terminal No. 10 and body ground within 2 seconds.

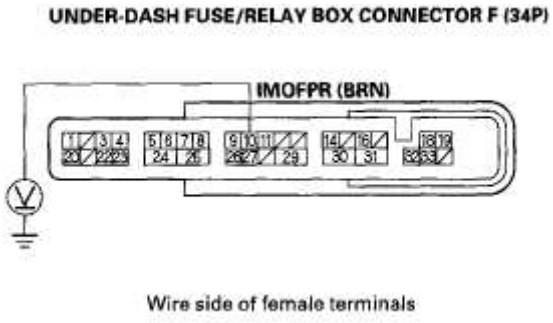


Fig. 19: Measuring Voltage Between Fuse/Relay Box Connector F (34P) Terminal No. 10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Update the ECM/PCM if it does not have the latest software (see **UPDATING ECM/PCM**), or substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**), then recheck. If the symptom/indication goes away with a known-good ECM/PCM, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**).

NO - Go to step 28.

28. Turn the ignition switch ON (II), and measure voltage between under-dash fuse/relay box connector F (34P) terminal No. 10 and body ground after 2 seconds.

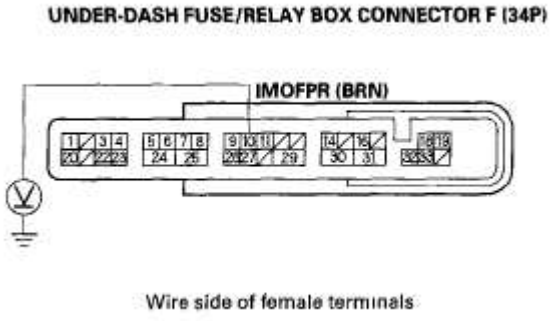


Fig. 20: Measuring Voltage Between Fuse/Relay Box Connector F Terminal No. 10 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 29.

NO - If needed, replace the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**), then go to step 29.

29. Turn the ignition switch OFF.
30. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION**).
31. Remove the rear floor upper cross-member, then remove the access panel from the floor (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
32. Turn the ignition switch ON (II), and measure voltage between fuel tank unit 4P connector terminal No. 2 and body ground within 2 seconds.

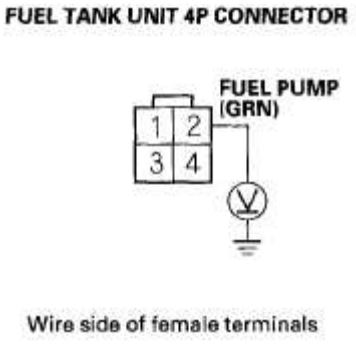


Fig. 21: Measuring Voltage Between Fuel Tank Unit 4P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 37.

NO - Go to step 33.

33. Turn the ignition switch OFF.
34. Remove PGM-FI main relay 2 (FUEL PUMP).
35. Connect PGM-FI main relay 2 (FUEL PUMP) 4P connector terminals No. 1 and No. 2 with a jumper wire.

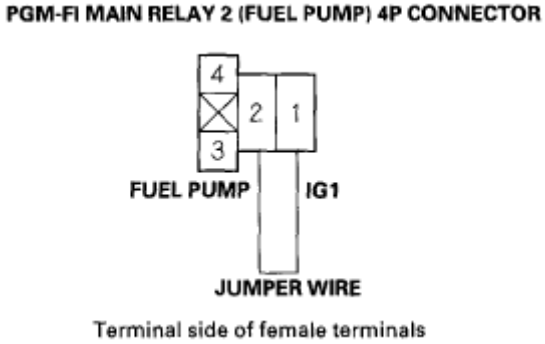


Fig. 22: Connecting PGM-FI Main Relay 4P Connector Terminals No. 1 And 2 With Jumper Wire
Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Turn the ignition switch ON (II), and measure voltage between fuel tank unit 4P connector terminal No. 2 and body ground within 2 seconds.

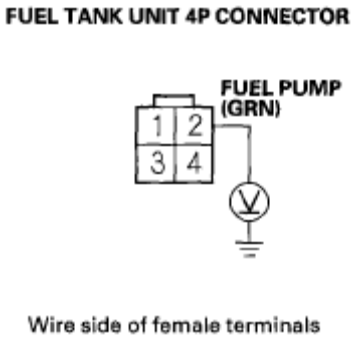


Fig. 23: Measuring Voltage Between Fuel Tank Unit 4P Connector Terminal No. 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Replace PGM-FI main relay 2 (FUEL PUMP).

NO - Repair open in the wire between PGM-FI main relay 2 (FUEL PUMP) and the fuel tank unit 4P connector.

37. Turn the ignition switch OFF.
38. Check for continuity between fuel tank unit 4P connector terminal No. 4 and body ground.

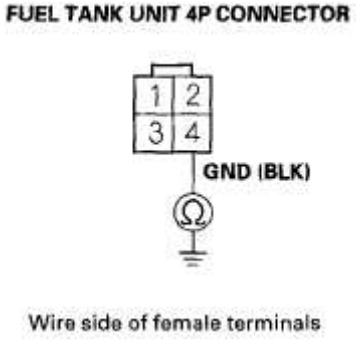


Fig. 24: Checking Continuity Between Fuel Tank Unit 4P Connector Terminal No. 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Replace the fuel pump (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT**).

NO - Repair open in the wire between the fuel tank unit 4P connector and G601; 4-door (see **CONNECTOR TO HARNESS INDEX**), 2-door (see **CONNECTOR TO HARNESS INDEX**).

FUEL PRESSURE RELIEVING

Before disconnecting fuel lines or hoses, relieve pressure from the system by disabling the fuel pump and disconnecting the fuel tube/quick connect fitting in the engine compartment.

WITH THE HDS

1. Make sure you have the anti-theft code for the audio system or the navigation system (if equipped).
2. Turn the ignition switch OFF.
3. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

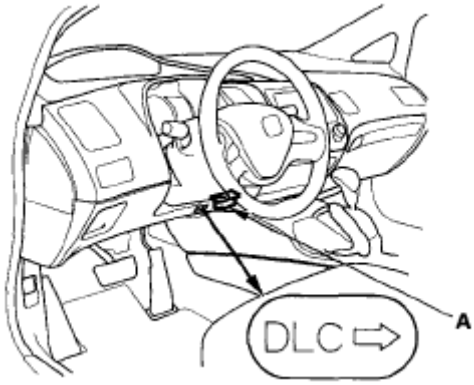


Fig. 25: Connecting HDS To DLC
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Turn the ignition switch ON (II).
5. Make sure the HDS communicates with the ECM/PCM and other vehicle systems. If it doesn't, go to the DLC circuit troubleshooting (see **DLC CIRCUIT TROUBLESHOOTING**).

6. Turn the ignition switch OFF.
7. Remove the fuel fill cap to relieve the pressure in the fuel tank.
8. Turn the ignition switch ON (II).
9. From the INSPECTION MENU of the HDS, select Fuel Pump OFF, then start the engine, and let it idle until it stalls.

NOTE:

- **Do not allow the engine to idle above 1,000 rpm or the ECM/PCM will continue to operate the fuel pump.**
- **A DTC or a Temporary DTC may be set during this procedure. Check for DTCs, and clear them as needed (see HDS CLEAR COMMAND).**

10. Turn the ignition switch OFF.
11. Disconnect the negative cable from the battery.
12. Remove the quick-connect fitting cover (A).

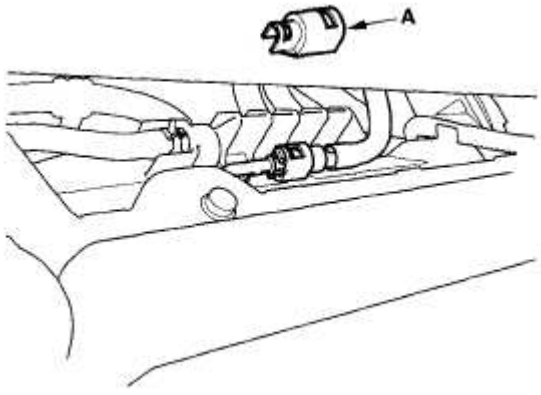


Fig. 26: Removing Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check the fuel quick-connect fitting for dirt, and clean it if needed.
14. Place a rag or shop towel over the quick-connect fitting (A).

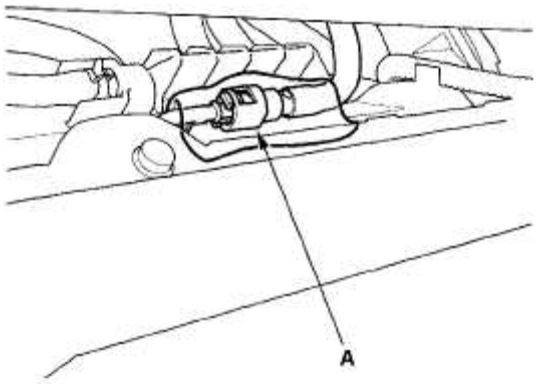


Fig. 27: Placing Rag Or Shop Towel Over Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

NOTE:

- **Be careful not to damage the line (E) or other parts.**
- **Do not use tools.**
- **If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.**
- **Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.**

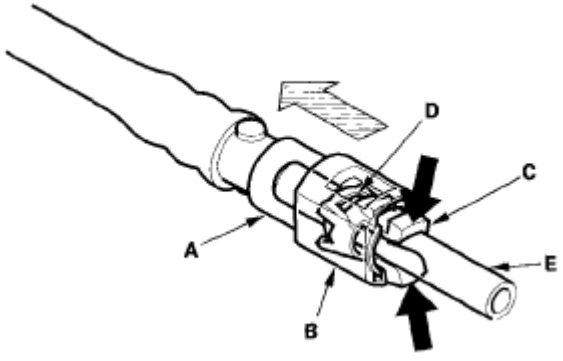


Fig. 28: Disconnecting Quick-Connect Fitting
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 4 in **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).
17. Reconnect the negative cable to the battery, then do this:
18. Enter the anti-theft code for the audio system or the navigation system (if equipped), then enter the audio presets. Set the clock (on vehicles without navigation).

WITHOUT THE HDS

1. Make sure you have the anti-theft code for the audio system or the navigation system (if equipped).
2. Remove the under-dash fuse/relay box (see **REMOVAL AND INSTALLATION**), then remove PGM-FI main relay 2 (FUEL PUMP) (A) from the under-dash fuse/relay box.

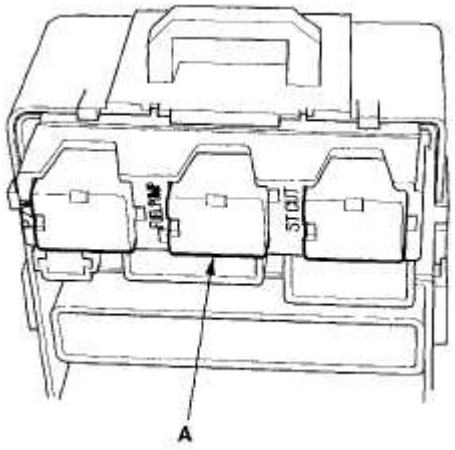


Fig. 29: Removing PGM-FI Main Relay (Fuel Pump)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Reinstall the under-dash fuse/relay box.
4. Start the engine, and let it idle until it stalls.

NOTE: If any DTCs are stored, clear and ignore them.

5. Turn the ignition switch OFF.
6. Remove the fuel fill cap.

7. Disconnect the negative cable from the battery.
8. Remove the quick-connect fitting cover (A).

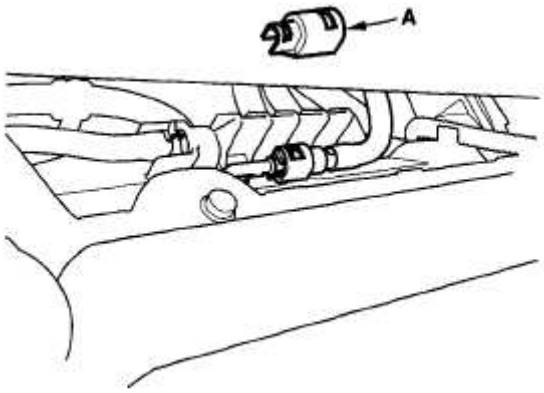


Fig. 30: Removing Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Check the fuel quick-connect fitting for dirt, and clean it if needed.
10. Place a rag or shop towel over the quick-connect fitting (A).

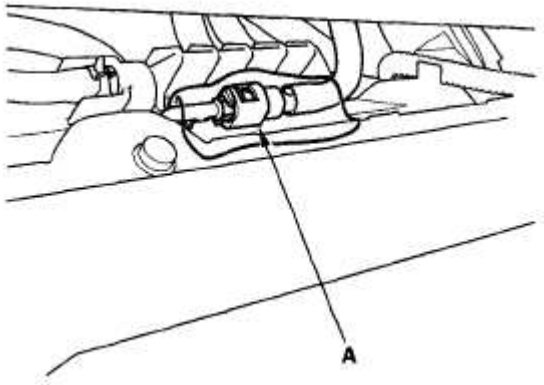


Fig. 31: Placing Rag Or Shop Towel Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Disconnect the quick-connect fitting (A): Hold the connector (B) with one hand, and squeeze the retainer tabs (C) with the other hand to release them from the locking tabs (D). Pull the connector off.

NOTE:

- **Be careful not to damage the line (E) or other parts.**

- **Do not use tools.**
- **If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.**
- **Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.**

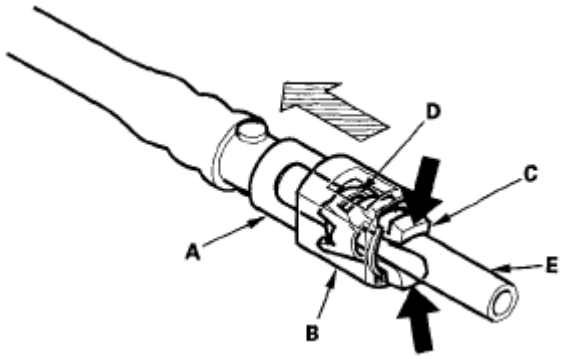


Fig. 32: Disconnecting Quick-Connect Fitting
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. After disconnecting the quick-connect fitting, check it for dirt or damage (see step 4 in **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).
13. Reconnect the negative cable to the battery, then do this:
14. Enter the anti-theft code for the audio system or the navigation system (if equipped), then enter the audio presets. Set the clock (on vehicles without navigation).

FUEL PRESSURE TEST

Special Tools Required

- Fuel pressure gauge 07406-004000B
- Fuel pressure gauge attachment set 07AAJ-S6MA150

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
2. Disconnect the quick-connect fitting. Attach the fuel pressure gauge set and the

fuel pressure gauge.

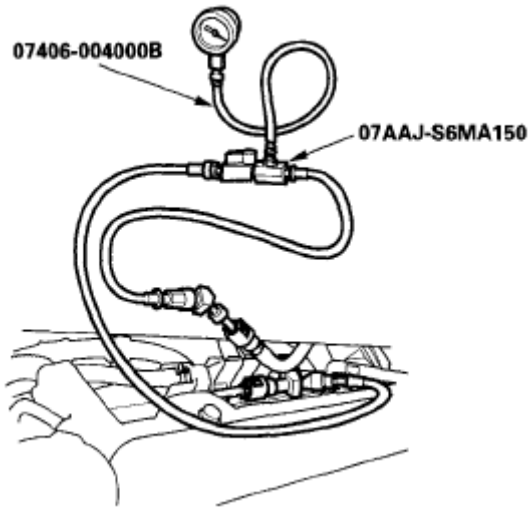


Fig. 33: Attaching Fuel Pressure Gauge Set And Fuel Pressure Gauge
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Start the engine, and let it idle.
   - If the engine starts, go to step 5.
   - If the engine does not start, go to step 4.
4. Check to see if the fuel pump is running: Listen to the fuel filler port with the fuel fill cap removed. The fuel pump should run for 2 seconds when the ignition switch is first turned on.
   - If the pump runs, go to step 5.
   - If the pump does not run, do the fuel pump circuit troubleshooting (see **FUEL PUMP CIRCUIT TROUBLESHOOTING**).
5. Read the fuel pressure gauge. The pressure should be 380-430 kPa (3.9-4.4 kgf/cm^2 , 55-63 psi).
   - If the pressure is OK, the test is complete.
   - If the pressure is out of specification, replace the fuel pressure regulator (see **FUEL PRESSURE REGULATOR REPLACEMENT**) and the fuel filter (see **FUEL PRESSURE REGULATOR REPLACEMENT**), then recheck the fuel pressure.

FUEL TANK DRAINING

1. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
2. Using a hand pump, a hose, and a container suitable for fuel, draw the fuel from the fuel tank.
3. Reinstall the fuel tank unit (see **INSTALLATION**).

FUEL LINE INSPECTION

Check the fuel system lines and hoses for damage, leaks, and deterioration. Replace any damaged parts.

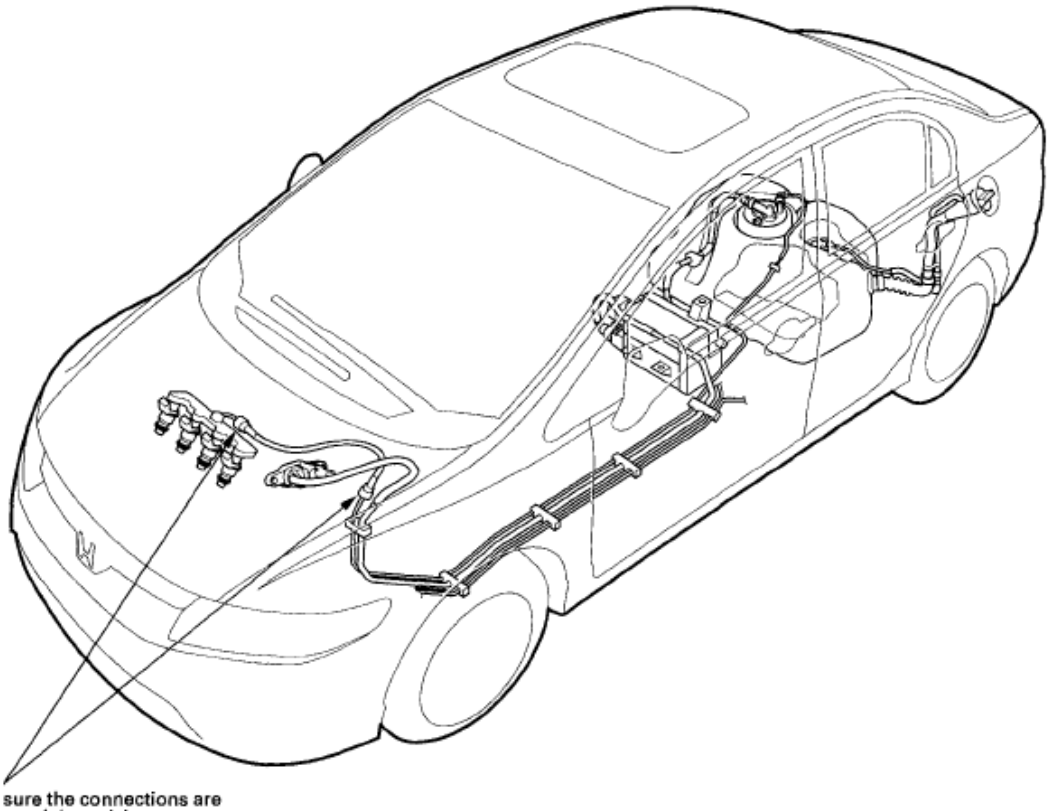


Fig. 34: Checking Fuel System Lines And Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Check all clamps, and make sure they are properly positioned and tightened.

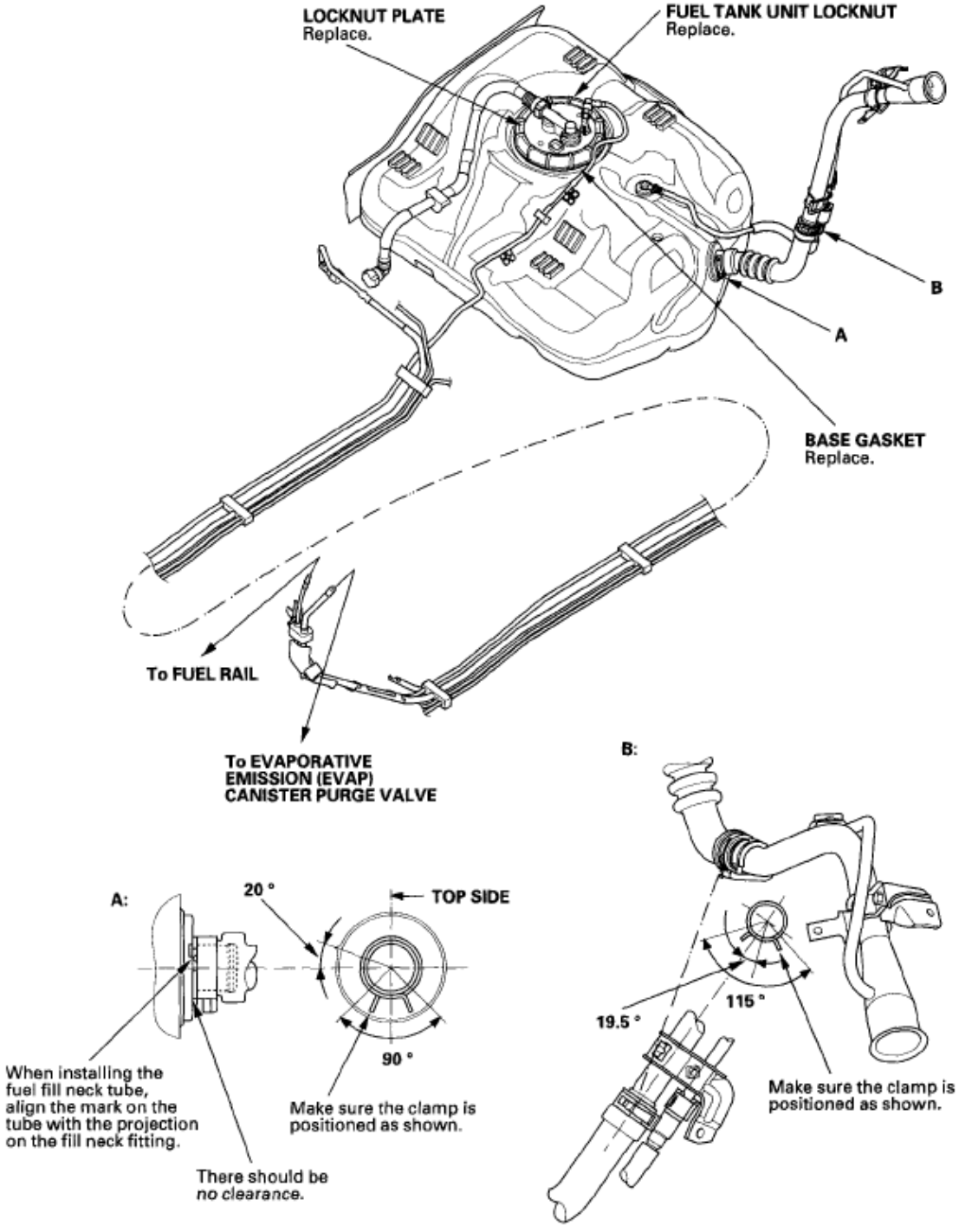
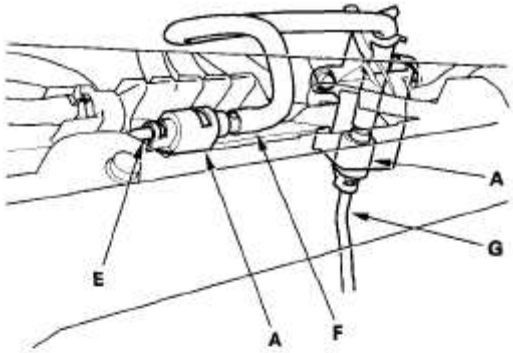


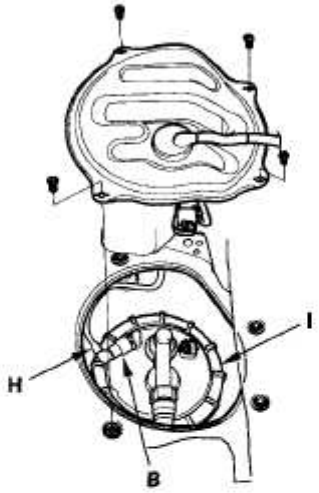
Fig. 35: Checking All Clamps
Courtesy of AMERICAN HONDA MOTOR CO., INC.

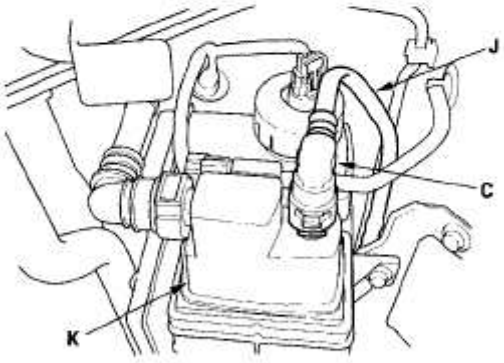
FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS

The fuel line/quick-connect fittings (A), (B), (C), and (D) connect the fuel rail (E) to the fuel feed hose (F), the fuel feed hose to the fuel line (G), the fuel line (H) to the fuel tank unit (I), the fuel vapor line (J) to the EVAP canister (K), and the fuel tank vapor recirculation tube (L) to the fuel fill pipe (M). When removing or installing the fuel feed hose, the fuel tank unit, or the fuel tank, it is necessary to disconnect or connect the quick-connect fittings. Pay attention to the following:

- The fuel feed hoses, fuel line, and quick-connect fittings are not heat-resistant; be careful not to damage them during welding or other heat-generating procedures.
- The fuel feed hoses, fuel line, and quick-connect fittings are not acid-proof; do not touch them with a shop towel that was used for wiping battery electrolyte. Replace them if they come in contact with electrolyte or something similar.
- When connecting or disconnecting the fuel feed hoses, fuel line, and quick-connect fittings, be careful not to bend or twist them excessively. Replace them if they are damaged.


A
G
E
A
F


I
H
B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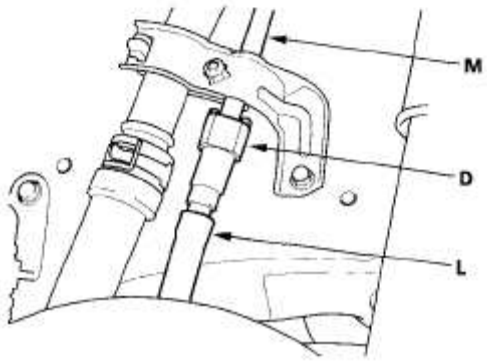

M
D
L

Fig. 36: Precautions For Fuel Line/Quick-Connect Fitting
Courtesy of AMERICAN HONDA MOTOR CO., INC.

A disconnected quick-connect fitting can be reconnected, but the retainer on the mating line cannot be reused once it has been removed from the line. Replace the retainer when:

- replacing the fuel rail.
- replacing the fuel line.
- replacing the fuel pump.
- replacing the fuel filter.
- replacing the fuel gauge sending unit.
- replacing the EVAP purge line.
- replacing the EVAP canister.
- replacing the fuel tank.
- replacing the fuel fill pipe.
- it has been removed from the line.
- it is damaged.

FUEL LINE/QUICK-CONNECT FITTING

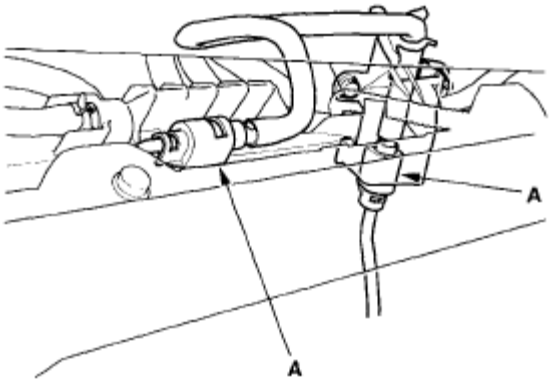
Location	Manufacturer	Retainer color	Line diameter
A	Tokai	Green	0.25 in. (6.3 mm)
B	Sanoh	White	0.4 in. (9.5 mm)
C	Sanoh	White	0.5 in. (12 mm)
D	Tokai	Natural	0.5 in. (12 mm)

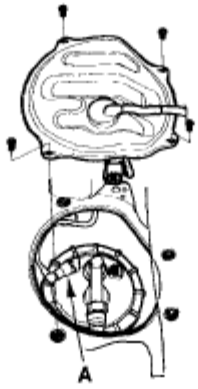
FUEL LINE/QUICK-CONNECT FITTING REMOVAL

NOTE: Before you work on the fuel lines and fittings, read the "Fuel Line/Quick-Connect Fitting Precautions" (see FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS).

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).

2. Check the fuel quick-connect fittings (A) for dirt, and clean them if needed.


A
A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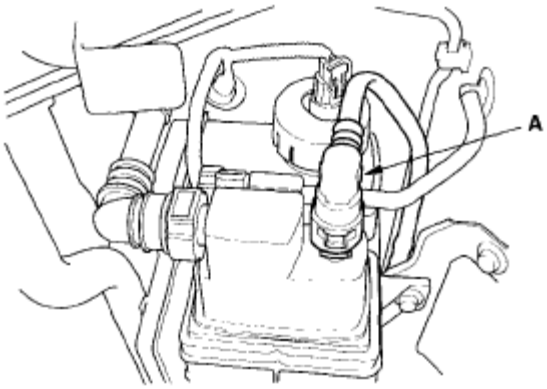
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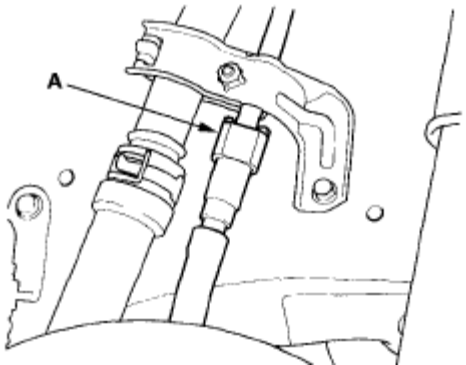

A

Fig. 37: Checking Fuel Quick-Connect Fittings
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Place a rag or shop towel over the quick-connect fitting. Hold the connector (A) with one hand, and squeeze the retainer tabs (B) with the other hand to release them from the locking tabs (C). Pull the connector off.

NOTE:

- **Be careful not to damage the line (D) or other parts. Do not use tools.**
- **If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.**
- **Do not remove the retainer from the line; once removed, the retainer must be replaced with a new one.**

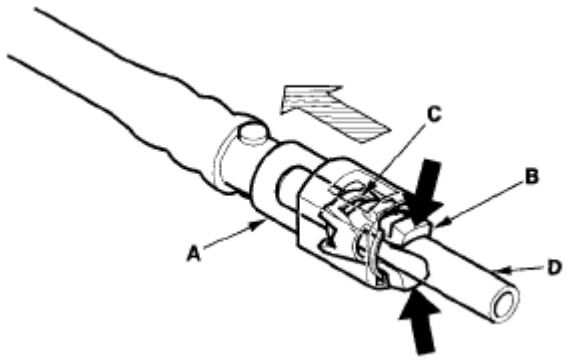


Fig. 38: Pulling Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Check the contact area (A) of the line (B) for dirt or damage.
   - If it is dirty, clean the connector with a pressure washer, and dry it with the compressed air.
   - If it is rusty or damaged, replace the fuel filter or the fuel feed line.

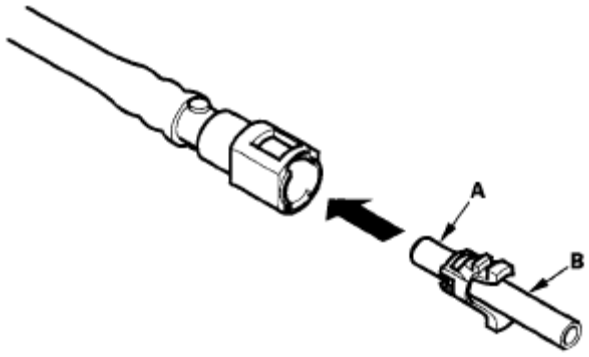


Fig. 39: Checking Contact Area Of Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. To prevent damage and keep foreign matter out, cover the disconnected connector and line ends with plastic bags (A).

NOTE: The retainer cannot be reused once it has been removed from the line. Replace the retainer when:

- **replacing the fuel rail.**
- **replacing the fuel feed line.**
- **replacing the fuel pump.**
- **replacing the fuel filter.**
- **replacing the fuel gauge sending unit.**
- **replacing the EVAP purge pipe.**
- **replacing the EVAP canister.**
- **replacing the fuel tank.**
- **replacing the fuel fill pipe.**
- **it has been removed from the line.**
- **it is damaged.**

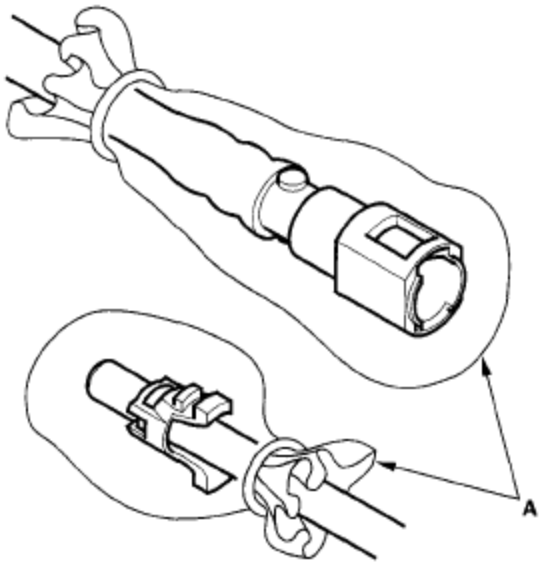


Fig. 40: Covering Connector And Line In Plastic Bags
Courtesy of AMERICAN HONDA MOTOR CO., INC.

FUEL LINE/QUICK-CONNECT FITTING INSTALLATION

NOTE: Before you work on the fuel lines and fittings, read the "Fuel Line/Quick-Connect Fitting Precautions" (see FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS).

1. Check the contact area (A) of the line (B) for dirt or damage, and clean it if needed.

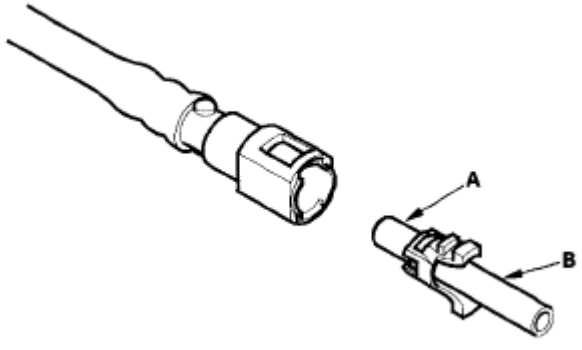


Fig. 41: Checking Contact Area And Line
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Insert a new retainer (A) into the connector (B) if the retainer is damaged, or after:
   - replacing the fuel rail.
   - replacing the fuel feed line.
   - replacing the fuel pump.
   - replacing the fuel filter.
   - replacing the fuel gauge sending unit.
   - replacing the EVAP purge pipe.
   - replacing the EVAP canister.
   - replacing the fuel tank.
   - replacing the fuel fill pipe.
   - removing the retainer from the line.
   - Use the same manufacturer retainer and the same size retainer when replacing the retainer (see **FUEL LINE/QUICK-CONNECT FITTING PRECAUTIONS**).

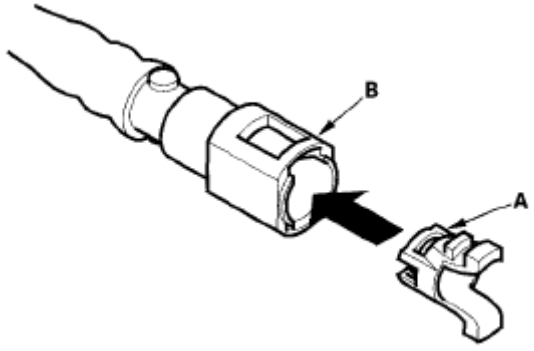
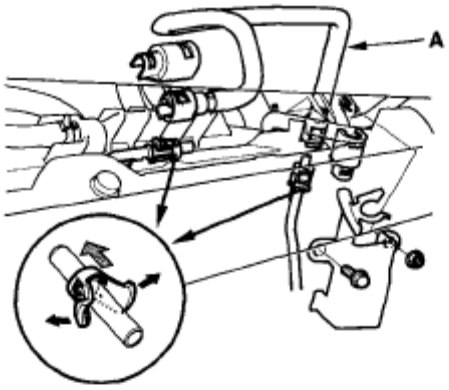
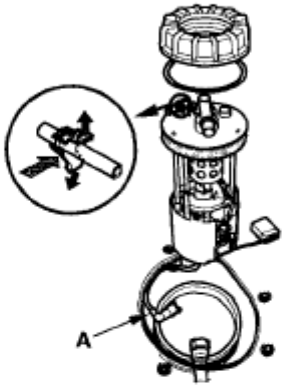


Fig. 42: Inserting Retainer Into Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Before connecting a new fuel tube/quick-connect fitting assembly (A), remove the old retainer from the mating line.


A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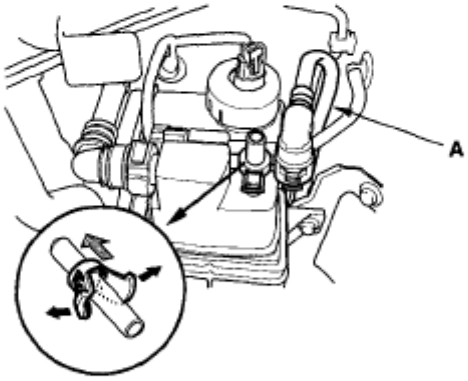
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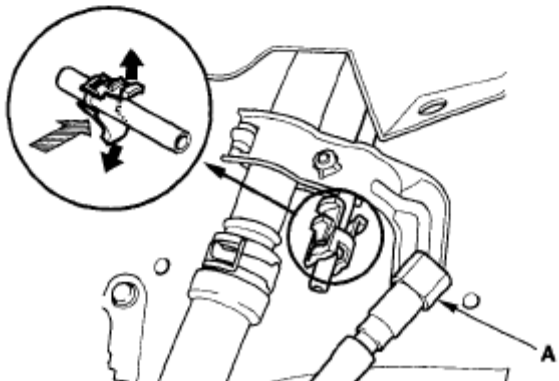
A

Fig. 43: Removing Old Retainer From Mating Line Before Connecting Fuel Tube/Quick-Connect Fitting Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Align the quick-connect fittings with the line (A), and align the retainer locking tabs (B) with the connector grooves (C). Then press the quick-connect fittings onto the line until both retainer tabs lock with a clicking sound.

NOTE: If it is hard to connect, put a small amount of new engine oil on the line end.

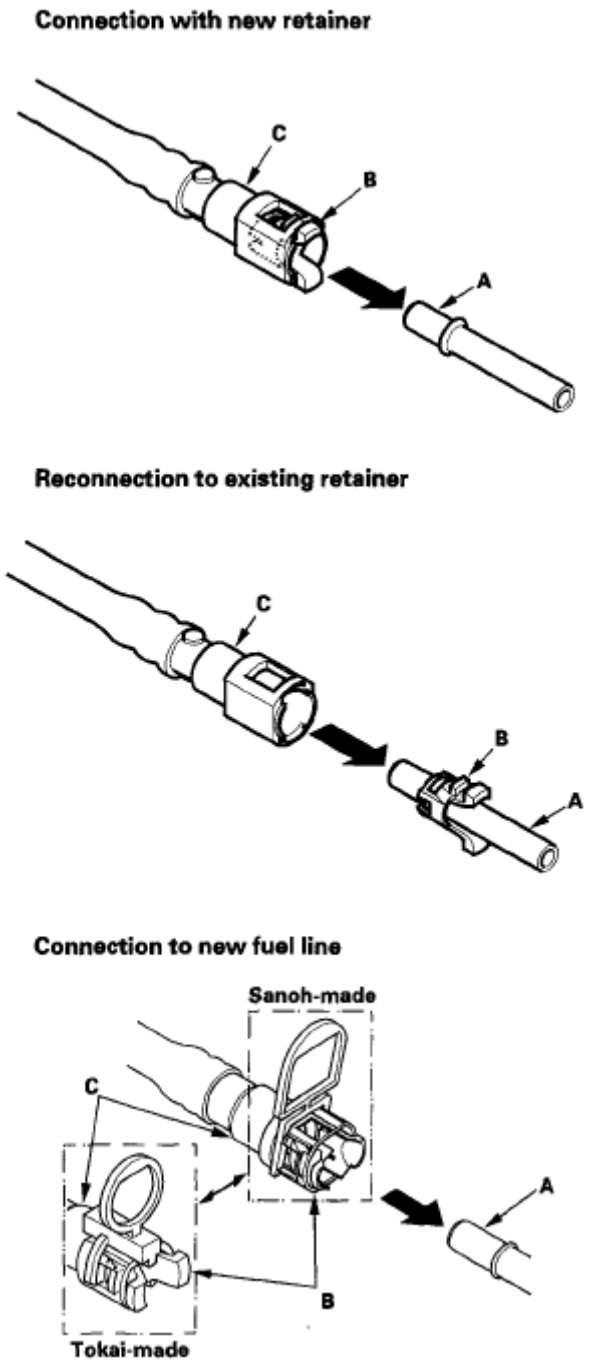

Fig. 44: Aligning Quick-Connect Fittings With Line And Retainer Locking Tabs With Connector Grooves
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. When you reconnect the connector with the old retainer, make sure the connection is secure and the tabs are firmly locked into place; check visually

and also by pulling the connector. When you replace the fuel line with a new one, make sure you remove the ring pull upwards after you confirm the connection is secure.

NOTE: Before you remove the ring pull, make sure the fuel line connection is secure. If the connection is not secure, the ring pull could break when you try to remove it.

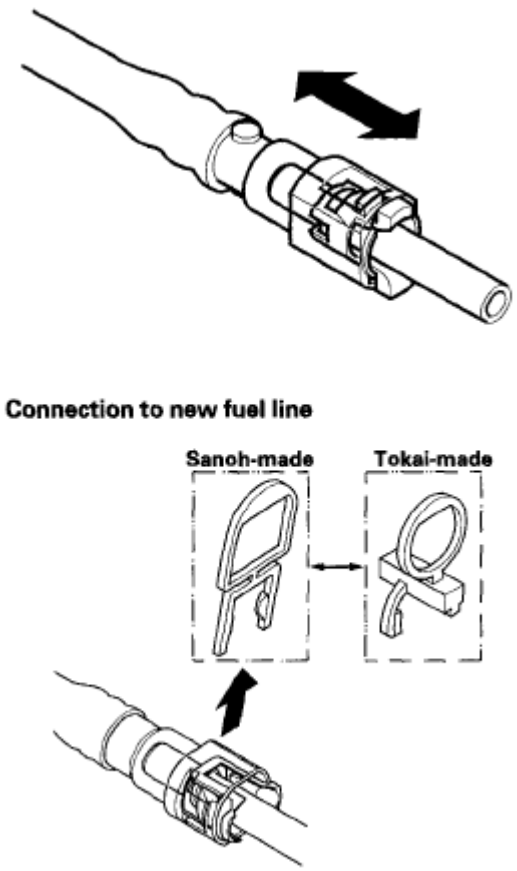

Fig. 45: Making Sure Connection Is Secure And Tabs Are Firmly Locked Into Place
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Reconnect the negative cable to the battery, and turn the ignition switch ON (II) (but do not operate the starter motor). The fuel pump will run for about 2 seconds, and fuel pressure will rise. Repeat this two or three times, and check that there is no leakage in the fuel supply system.

FUEL TANK UNIT REMOVAL/INSTALLATION

Special Tools Required

Fuel pump module locknut wrench 07AAA-SNAA100

REMOVAL

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
2. Remove the fuel fill cap.
3. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION**).
4. Remove the rear floor upper cross-member (A).

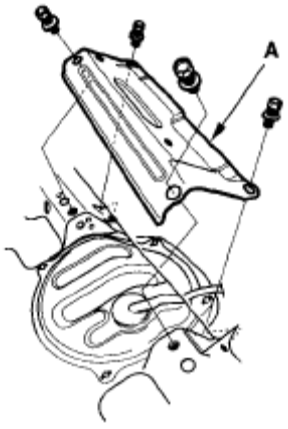

Fig. 46: Removing Rear Floor Upper Cross-Member Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the access panel (A) from the floor.

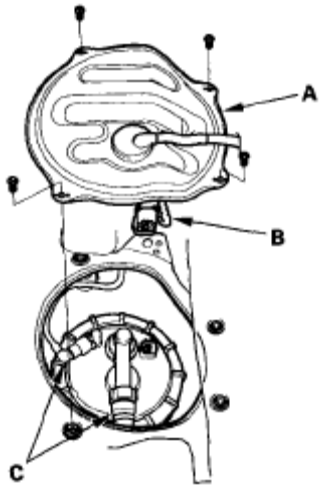

Fig. 47: Removing Access Panel From Floor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Disconnect the fuel tank unit 4P connector (B).
7. Disconnect the quick-connect fittings (C) from the fuel tank unit.
8. Using the special tool, loosen the locknut (A).

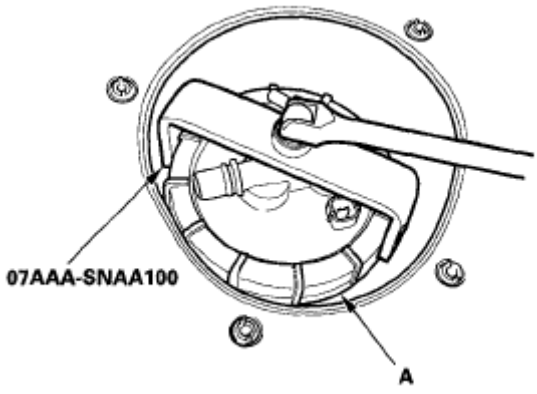

Fig. 48: Loosening Locknut Using Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the locknut (A) and the fuel tank unit (B).

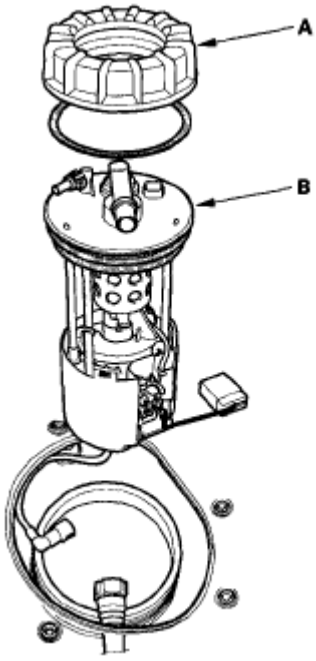

Fig. 49: Identifying Locknut And Fuel Tank Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INSTALLATION

1. Temporarily attach a new base gasket (A) to the fuel tank unit (B), then insert the fuel tank unit partially into the fuel tank.
    - Be careful not to damage a new base gasket.
    - Be careful not to bend the fuel gauge sending unit.
    - Do not coat the base gasket with oil.

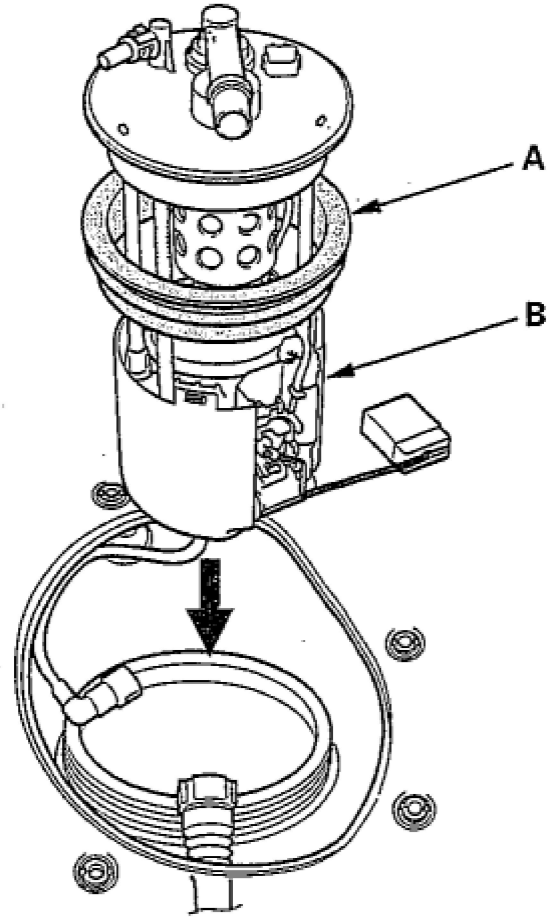

Fig. 50: Identifying Base Gasket And Fuel Tank Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Transfer the base gasket (A) from the fuel tank unit onto the fuel tank.

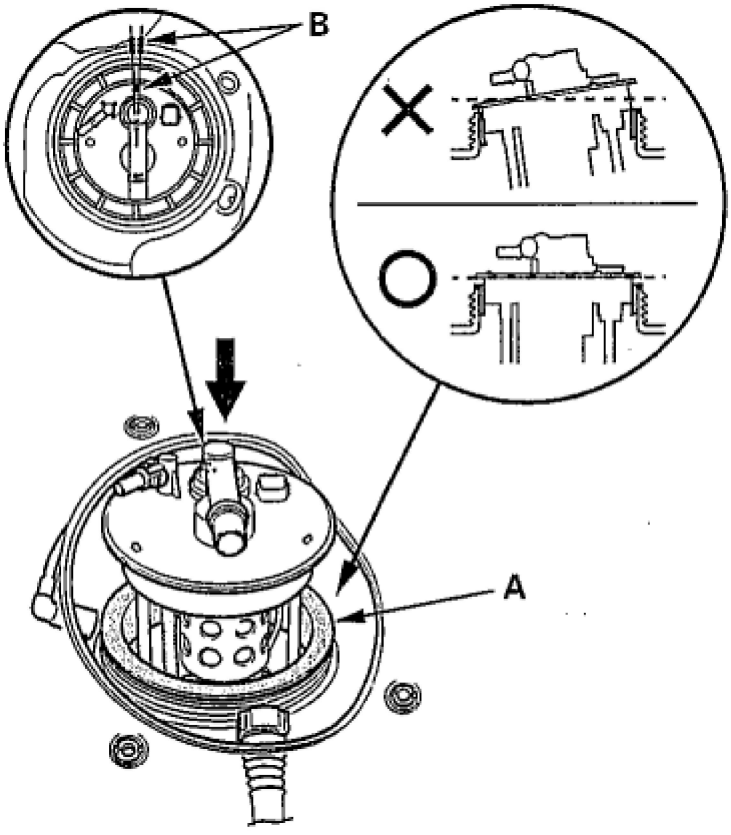

Fig. 51: Identifying Base Gasket From The Fuel Tank, Alignment Marks And Fuel Tank
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Align the marks (B) on the fuel tank and the fuel tank unit, then insert the fuel tank unit into the fuel tank until it sits on the base gasket.

NOTE: To prevent a fuel leak, check the base gasket, visually or by hand, to make sure it is not pinched

4. Install the new locknut plate (A) and the new locknut (B).

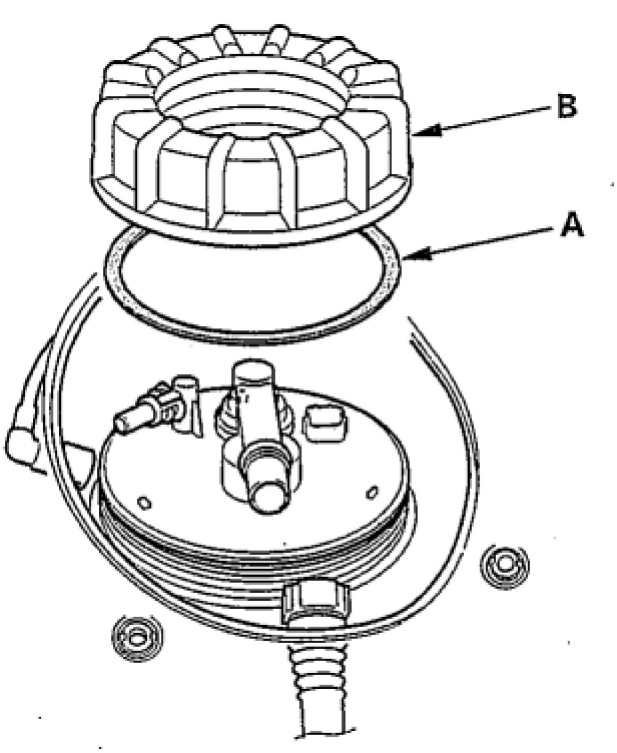

Fig. 52: Identifying Locknut Plate And The Locknut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Using the special tool, tighten a locknut (A) to the specified torque.
   - After tightening, make sure the marks are still aligned.
   - After installation, check the base gasket, visually o by hand, to make sure it is not pinched.

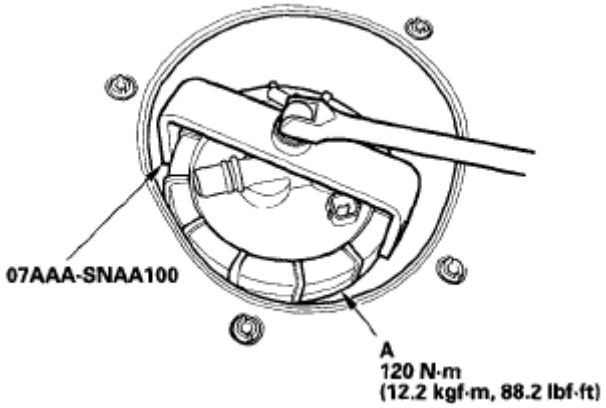

Fig. 53: Tightening Fuel Tank Unit Locknut (With Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Connect the fuel tank unit 4P connector, then connect the quick-connect fitting.
7. Reconnect the negative cable to the battery, and turn the ignition switch ON (II) (but do not operate the starter motor). The fuel pump will run for about 2 seconds, and fuel pressure will rise. Repeat this two or three times, then check that there is no leakage in the fuel supply system.
8. Install the access panel (A) to the floor.

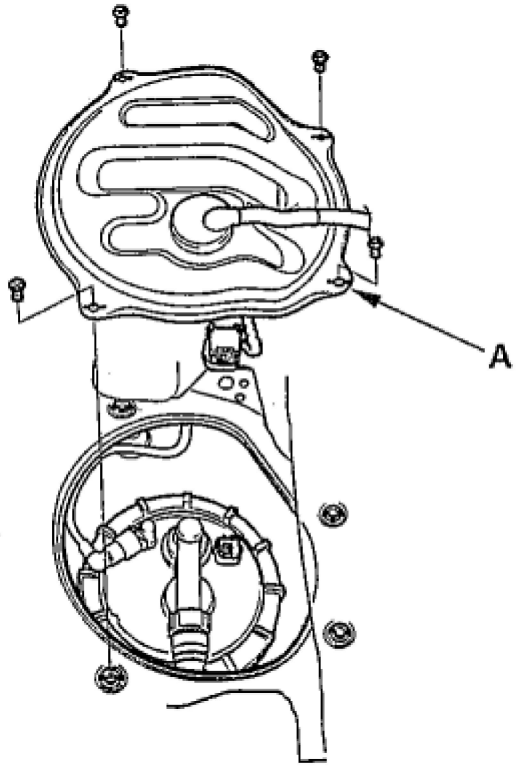

Fig. 54: Installing The Access Panel To The Floor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the rear floor upper cross-member (A).

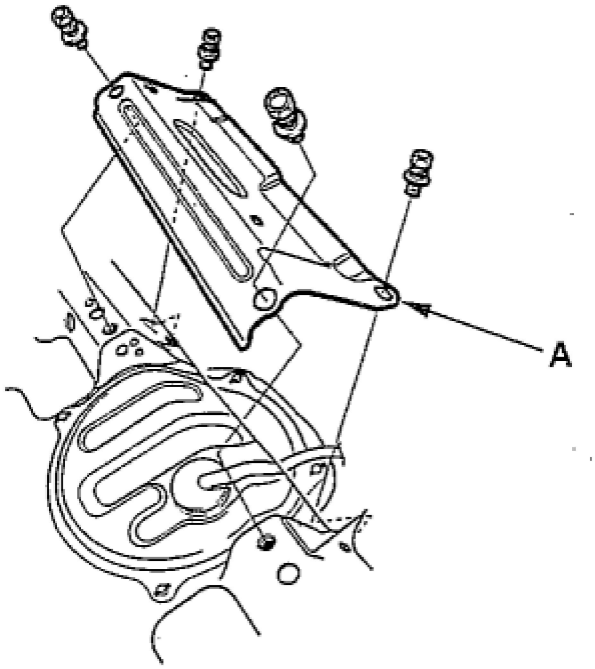

Fig. 55: Installing The Rear Floor Upper Cross-Member
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Install the rear seat cushion (see **SEAT CUSHION**)

FUEL PRESSURE REGULATOR REPLACEMENT

1. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
2. Remove the bracket (A).

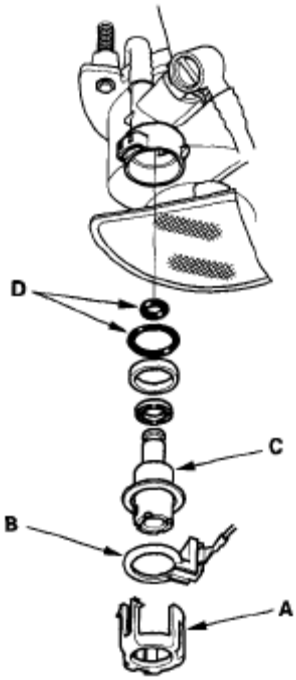

Fig. 56: Removing Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the ground ring (B).
4. Remove the fuel pressure regulator (C).
5. Install the parts in the reverse order of removal with new O-rings (D) and a new bracket (A). When installing the fuel tank unit, align the marks on the unit and the fuel tank (see **INSTALLATION**).

NOTE: Coat the O-rings with clean engine oil; do not use any other oil. Do not pinch the O-rings during installation.

FUEL FILTER REPLACEMENT

The fuel filter should be replaced whenever the fuel pressure drops below the specified value (see **FUEL PRESSURE TEST**), after making sure that the fuel pump and the fuel pressure regulator are OK.

1. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
2. Remove the fuel filter (A).

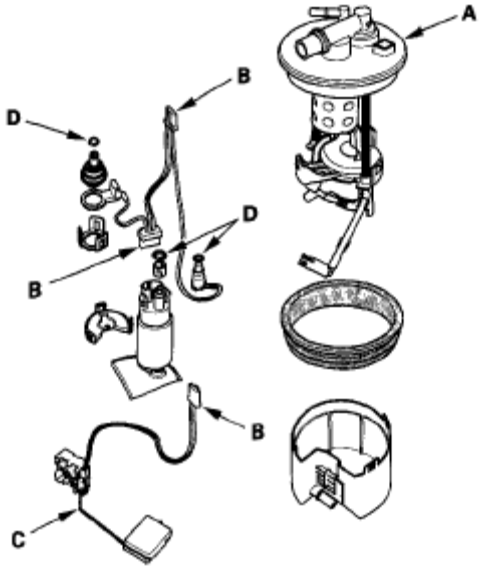

Fig. 57: Removing Fuel Filter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check these items before installing the fuel tank unit:
   - When connecting the wire harness, make sure the connection is secure and the connectors (B) are firmly locked into place.
   - When installing the fuel gauge sending unit (C), make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.
4. Install the parts in the reverse order of removal with new O-rings (D). When installing the fuel tank unit, align the marks on the unit and the fuel tank (see **INSTALLATION**).

NOTE: Coat the O-rings with clean engine oil; do not use any other oil.

FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT

1. Remove the fuel tank unit (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
2. Remove the fuel level sensor (fuel sending unit) (A) from the fuel tank unit (B).

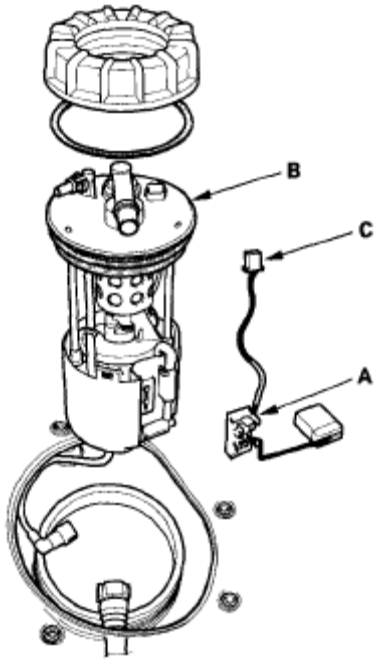

Fig. 58: Removing Fuel Level Sensor From Fuel Tank Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check these items before installing the fuel tank unit:
   - When connecting the wire harness, make sure the connection is secure and the connectors (C) are firmly locked into place.
   - When installing the fuel gauge sending unit, make sure the connection is secure and the connector is firmly locked into place. Be careful not to bend or twist it excessively.
4. Install the parts in the reverse order of removal. When installing the fuel tank unit, align the marks on the unit and the fuel tank (see **INSTALLATION**).

FUEL TANK REPLACEMENT

1. Drain the fuel tank (see **FUEL PRESSURE TEST**), then disconnect the fuel tank unit 4P connector (A) and the quick-connect fitting (B).

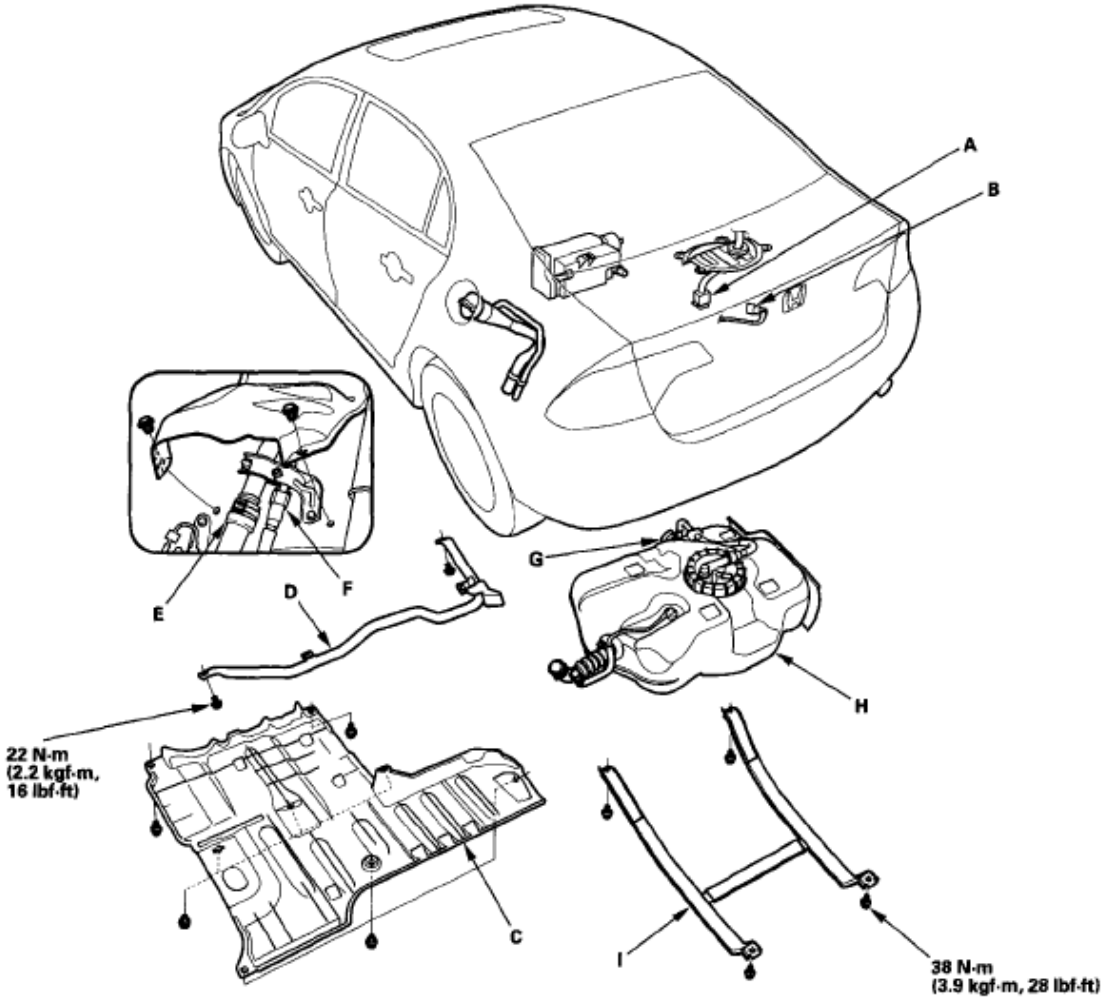

Fig. 59: Disconnecting Fuel Tank Unit 4P Connector And Quick-Connect Fitting (With Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Lift the vehicle, and support it with jackstands.
3. Remove the cover (C), and the EVAP canister guard (D).
4. Disconnect the fuel fill tube (E). Slide back the clamps, then twist the hoses as you pull to avoid damaging them.
5. Disconnect the quick-connect fitting (F) and the fuel tank vapor recirculation tube (G).
6. Place a jack or other support under the tank (H).
7. Remove the strap bolts and the strap (I).
8. Remove the fuel tank.

9. Install the parts in the reverse order of removal.

FUEL GAUGE SENDING UNIT TEST

NOTE: For the fuel gauge system circuit diagram, refer to the (see CIRCUIT DIAGRAM - GAUGE CONTROL MODULE (TACH)).

1. Check the No. 10 METER (7.5 A) fuse in the under-dash fuse/relay box before testing.
2. Check for body electrical system DTCs.
   - If no problem is found, go to step 3.
   - If DTC B1175 or B1176 is indicated, go to the indicated DTC's troubleshooting.
3. Turn the ignition switch OFF.
4. Remove the rear seat cushion (see **REAR SEAT REMOVAL/INSTALLATION**).
5. Remove the rear floor upper cross-member (A).

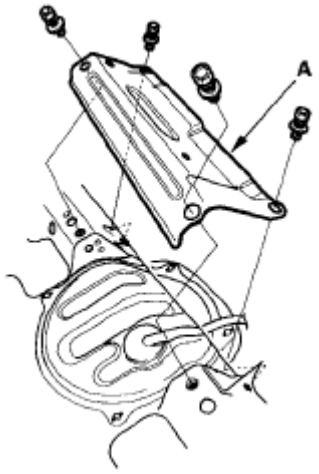

Fig. 60: Removing Rear Floor Upper Cross-Member
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the access panel (A) from the floor.

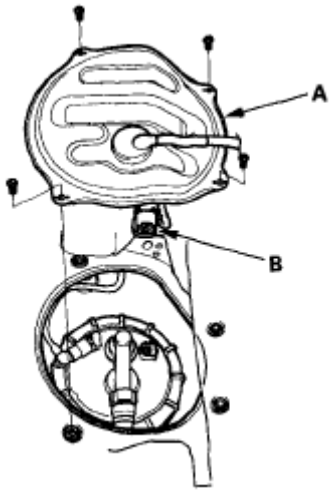

Fig. 61: Removing Access Panel From Floor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Disconnect the fuel tank unit 4P connector (B).
8. Measure voltage between fuel tank unit 4P connector terminals No. 1 and No. 3 with the ignition switch ON (II). There should be battery voltage.
   - If the voltage is OK, go to step 9.
   - If the voltage is not as specified, check for:
     - a short in the ORN (2-door: PUR) wire to ground.
     - an open in the ORN (2-door: PUR) or LT GRN (2-door: ORN) wire.

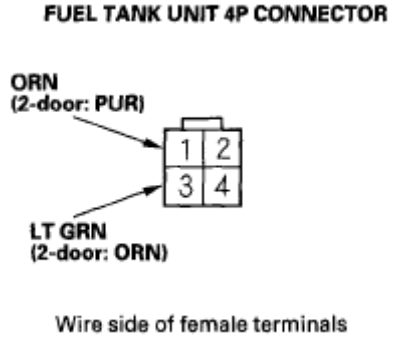

Fig. 62: Measuring Voltage Between Fuel Tank Unit 4P Connector Terminals No. 1 And 3 With Ignition Switch ON (II)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Turn the ignition switch OFF.

10. Remove the fuel tank unit from the fuel tank (see **FUEL TANK UNIT REMOVAL/INSTALLATION**).
11. Measure resistance between fuel tank unit 4P connector terminals No. 1 and No. 3 with the float at E (EMPTY), LOW (LOW FUEL INDICATOR), 1/2 (HALF FULL), and F (FULL) positions. If you do not get the following readings, replace the fuel gauge sending unit (see **FUEL PUMP/FUEL GAUGE SENDING UNIT REPLACEMENT**).

FLOAT POSITION RESISTANCE SPECIFICATION

Float Position	F 5.6 in. (139.8 mm)	1/2 2.9 in. (72.1 mm)	LOW 0.8 in. (19.5 mm)	E 0.4 in. (8.9 mm)
Resistance (ohms)	19 to 21	205.8 to 215.8	537.5 to 707	772 to 788

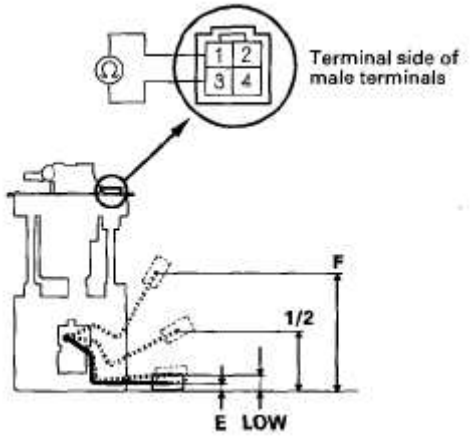

Fig. 63: Measuring Resistance Between Fuel Tank Unit 4P Connector Terminals No 1 And 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Reconnect the fuel tank unit 4P connector.
13. Remove the No. 23 BACK UP (10 A) fuse from the under-hood fuse/relay box for at least 10 seconds, then reinstall it.
14. Turn the ignition switch ON (II).
15. Check that the pointer of the fuel gauge indicates "F" with the float at F.
    - If the pointer of the fuel gauge does not indicate "F", replace the gauge assembly.

- If the gauge is OK, the test is complete.

NOTE:

- **The pointer of the fuel gauge returns to the bottom of the gauge dial when the ignition switch is OFF, regardless of the fuel level.**
- **Remove the No. 23 BACK UP (10 A) fuse from the under-hood fuse/relay box for at least 10 seconds after completing troubleshooting, otherwise it may take up to 20 minutes for the fuel gauge to indicate the correct fuel level.**

LOW FUEL INDICATOR TEST

1. Do the gauge self-diagnostic function (see **SELF-DIAGNOSTIC FUNCTION**).
   - If the low fuel indicator flashes, go to step 2.
   - If the low fuel indicator does not flash, replace the gauge control module (tach) (see **TACHOMETER**).
2. Check for body electrical system DTCs.
   - If any DTCs are indicated, do the indicated DTC's troubleshooting.
   - If no DTCs are indicated, go to step 3.
3. Do the fuel gauge sending unit test (see **FUEL GAUGE SENDING UNIT TEST**).